

ADDITIONS TO THE TASMANIAN MARINE MOLLUSCA, WITH DESCRIPTIONS OF NEW SPECIES.

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(Issued separately, 31st December, 1915.)

Plates I.-VIII.

A visit by the writer to the Furneaux Group in November, 1912, resulted in the addition of several species to our list,* and careful investigations in Port Arthur and D'Entrecasteaux Channel have largely increased our knowledge of our Chiton fauna, adding new species and extending the distribution of others.

The dredging operations in connection with the two last Easter camps of the Field Naturalists' Club at Safety Cove and Thouin or Wineglass Bay, have also added a number of interesting species. These localities are respectively the most northern and most southern spots at which deep-water dredging has been carried out in Tasmania.

It is proposed in this paper to give a list of the additions, to record certain facts respecting distribution, and to describe 40 species which appear to be new to science. The types of these last will be placed in the Tasmanian Museum collection. Altogether I here add nearly a hundred species to our list. May, 1915.

SEPIA CULTRATA, Hoyle.

Chall. Report XVI., p. 136, Pl. XX., f. 133.

Common at times in Frederick Henry Bay.

SEPIA APAMA, Gray.

Ceph. Antip. B.M., p. 103, 1849.

Common on beaches at Barren Island.

TROPHON SEGMENTATUS, Verco.

Trans. Royal Soc., S.A., Vol. XXXIII., 1909, p. 335,

Pl. XXIV., fig 3.

Several specimens, living and dead, from 50-70 fathoms, off Port Arthur.

DAPHNELLA FENESTRATA, Verco.

Op. cit., page 321, Pl. XXVIII, figs. '6-7.

Several small specimens from off Port Arthur, 50-70 fath., and also Thouin Bay, 40-50 fath.

* For a complete list of the species taken on that occasion see Victorian Naturalist, Vol. XXX., No. 3.

MARGINELLA DIPLOSTREPTUS, nom. mut.*M. biplicata*, Tate and May, T.R.S., S. Aus., 1900.Non *M. biplicata*, Krauss, 1852.**IMBRICARIA PORPHYRIA**, Verco.

Trans. R.S., S. Aus., 1896, p. 227, Pl. VIII., figs. 5-5a.

Off Thouin Bay, 40 fathoms, four specimens.

RETIZAFRA CALVA, Verco.T.R.S., S. Aus., Vol. XXXIV., 1910, p. 143, P. XXIX.,
f. 2-3.Off Thouin Bay, 40 fathoms, fairly numerous. The
Clathrate variety mentioned by the author also occurred.**PYRENE JAFFAENSIS**, Verco.

Op. cit., Pl. XXIX., figs. 5, 6.

Off Thouin Bay, 40 fath. Our shells are a variety dif-
fering from typical, by being finely spirally lirate.**DRILLIA PENTAGONALIS**, Verco.

T.R.S., S. Aus., 1896, p. 222, Pl. VII., figs. 2-2a.

40 fath. off Schouten Id., also off Port Arthur, 50-70
fath. This has been united with *D. cancellata*, Beddome,
but I consider they are distinct.**CANCELLARIA AUSTRALIS**, Sowerby.

Conch., Ill., 1832, fig. 22.

I collected this near Circular Head. It is a fine species,
quite distinct from all our other forms.**ADMETE STRICTA**, Hedley.Records, Aus. Mus., Vol VI., pt. 4, p. 295, Pl. LIV.,
fig. 10.40 fath. off Schouten Id., also 50-70 fath. off Port Arthur,
several examples.**NATICA STICTA**, Verco.T.R.S., S.A., Vol. XXXIII., 1909, p. 333, Pl. XXIX.,
figs. 4, 5, 6.

40 fath., off Thouin Bay. Three small specimens.

VERMICULARIA WAITEI, Hedley.Mem. Aus. Mus. (Thetis), Vol. IV., pt. 6, p. 347, fig. 72.
D'Entrecasteaux Channel.**ROYA NUTATA**, Hedley.

P.L.S., N.S.W., Vol. XXXIII., p. 9, fig. 15.

East Coast in several places, from 50 to 80 fath. Iden-
tified by the author.

ODOSTOMIA SIMPLEX, Angas.

P.Z.S., 1871, p. 15, Pl. I., fig. 10.

D'Entrecasteaux Channel; several specimens dredged in about 10 fathoms. I think this species has been previously recorded as *O. angasi*, Tryon, etc.

LEIOSTRACA KILCUNDÆ, Gatliff and Gabriel.

P.R. Soc., Vic., Vol. XXVII., N.S., 1914, p. 94, Pl. XIV., figs. 2 and 3.

East and South Coasts in about 50 fathoms. Four examples.

EULIMA TOPAZIACA, Hedley.

P.L.S., N.S.W., Vol. XXXIII., p. 470, pl. X., fig. 29. Three specimens from 24 fathoms, Port Esperance.

EULIMELLA COACTA, Watson.

Chal. Report, p. 498, Pl. XXXIII., fig. 4.

Several specimens from 40 to 60 fathoms in various places on the East Coast. Except that our shells are slightly longer in the mouth, they seem typical.

DIALA PULCHRA, A. Adams.

Ann. Mag. Nat. Hist. (3), X., 1862, p. 296.

Several specimens received some years ago from Miss Loder, from the N.W. Coast. They are quite typical from comparison with the figure of the type. See P.L. Soc., N.S.W., 1913, Pl. XVIII., f. 57 (C. Hedley). From the same source I am able to say definitely that the identification by Tate of a Tasmanian and S. Australian shell as *D. picta*, A. Ads., is wrong, and the name must pass from our list.

LIPPISTES ZODIACUS, Hedley.

P.L.S., N.S. Wales, Vol. XXXII., pt. 3, 1907, Pl. XVIII., fig. 30.

Numerous in 40 fathoms off Thouin Bay.

LIPPISTES TORCULARIS, Tenison Woods, as *Cingulina*.

P.L.S., N.S.W., II., 1878, p. 263.

About a dozen examples, from 40 fathoms, off Thouin Bay.

CERITHIOPSIS HALLIGANI, Hedley.

Records Aus. Mus. Vol. VI., pt. 2, 1905, p. 51, fig. 16. 40 fathoms, off Thouin Bay; a single specimen.

TRIPHORA INNOTABILIS, Hedley.

P.L. Soc., N.S.W., 1903, part 4, p. 608, Pl. XXXII., figs. 23, 24, 25.

Off Thouin Bay, in 40 fathoms; several examples.

TURRITELLA SOPHILÆ, Brazier.

P.L.S., N.S.W., Vol. VIII, p. 227.

Two specimens collected in the Furneaux Group by the Messrs. Atkinson were shown to me. They are rather beach-worn, but appear to belong to this species.

RISSOA NOVARIENSIS, Frauenfeldt.

Voy. Novara, Moll., p. 11, Pl. II., fig. 16.

Off Thouin Bay, 40 fathoms. Several specimens.

RISSOA WILSONENSIS, Gatliff and Gabriel.

P.R.S., Vic. 26 (N.S.), Pt. I., 1913, p. 68, Pl. VIII., fig. 4.

Numerous in 40 fathoms off Thouin Bay; also 100 fathoms off Cape Pillar; one specimen.

RISSOA IRAVADOIDIS, Gatliff and Gabriel.

Op. cit., p. 67, Pl. VIII., fig. 1.

Several from 40 fathoms, off Thouin Bay.

ONOA BASSIANA, Hedley.

Its range has been extended by the taking of several specimens—some living—from 40 fathoms, off Thouin Bay.

CHARISMA ARENACEA, Pritchard and Gatliff
(Leptothyra).

P.R.S., Vic., Vol. XIV. (N.S.), part 2, p. 181, Pl. IX, f. 3.

Several from 40 fathoms off Thouin Bay.

CLANCULUS OCHROLEUCUS, Philippi, 1846.

A single specimen collected on Forsyth Id., Furneaux Group.

NOTOACMÆA SUTERI, Iredale.

T.N.Z. Inst., Vol. 47, p. 430 = *Acmaea roseoradiata*, Suter.

Several specimens from 40 fath. off Thouin Bay. Identified from New Zealand examples.

ISCHNOCHITON DECUSSATUS, Reeve.

Conch. Icon, 1847, Pl. XVIII., f. 107.

Fairly numerous in a rock pool near the half-caste settlement on Barren Id.

ISCHNOCHITON USTULATUS, Reeve.

Op. cit., species 102.

Common with the last. Varies somewhat from South Australian specimens.

CHITON ORUKTUS, Maughan.

T.R.S., S. Aus., 1900, p. 89.

Numerous in Port Arthur, also Wedge Bay and Little Taylor's Bay. It attains a much greater size than in S. Australia, some specimens being upwards of 23 mill. in length.

CHITON AUREOMACULATUS, Bednall and Mathews.

P.M.S., London, Vol. VII., pt. 2, 1906, p. 91, Pl. IX., f. 3.

Three examples collected in Port Arthur by E. Maule. I think it possible that this is the young form of *C. tricostalis*.

LORICA VOLVOX, Reeve.

Conch. Icon., sp. 31.

Furneaux Group, several examples; also Port Arthur, where they are particularly fine; also in Norfolk Bay.

ACANTHOCHITON KIMBERI, Torr.

T.R.S., S. Aus., 1912, Vol. XXXVI., p. 167, Pl. VI., figs. 5a-6.

Several specimens taken in Port Arthur.

ACANTHOCHITON RUBROSTRATUS, Torr.

Op. cit., p. 169, Pl. VII., fig. 7 a-f.

Port Arthur, Wedge Bay, Little Taylor's Bay. Closely resembles *A. costatus*, Adams and Angas.

LEUCONOPSIS PELLUCIDUS, Cooper.

Micro. Jour., 1 Jan., 1841, p. 16. Types from Van Diemen's Land.

This is the species wrongly identified as *O. minor*, Mouss., in Tate and May, page 420. Occurs also at Barren Island.

HYDATINA EXIGUA, Hedley.

R.A. Mus., Vol. VIII., p. 158, Pl. XLV., f. 46.

A specimen was collected by Miss Lodder on the North Coast, who wrongly identified it as *Akera tasmanica*, Beddome, under which name it was figured by Hedley, P.L.S., N.S.W., 1901.

DENTALIUM VIRGULA, Hedley.

M.A. Mus., Vol. IV., 1903, p. 338, fig. 62.

A number taken in 50-70 fathoms, off Port Arthur.

CUSPIDARIA ANGASI, Smith.

Chal. Report, p. 47, Pl. IX., fig. 5.

Several examples from 50-70 fathoms, off Port Arthur. Smith's figure represents a young shell. The beak becomes much more prominent as growth proceeds.

CUSPIDARIA BRAZIERI, Smith.

Op. cit., p. 51, Pl. IX., f. 3.

D'Entrecasteaux Channel and off Port Arthur, 50-70 fathoms.

PHOLADOMYA ARENOSA, Hedley.

P.L.S., N.S.W., Vol. XXIX., 1904, p. 197, Pl. IX., f. 26, 27, as *Thraciopsis*.

A fair number of single valves from 40 fathoms, off Thouin Bay.

PHOLADOMYA TASMANICA, Hedley and May.

P. Mal. S., Vol. XI., pt. 11, 1914, p. 132, figs. in text.

50 fathoms, three miles south of Port Arthur. Types.

THRACIOPSIS LINCOLNENSIS, Verco.

T.R.S., S. Aus., 1908, p. 229, Pl. XXVIII., figs. 19, 20, 21.

I find that the species catalogued by Tate and May, page 423, is really referable to this species. It has only been taken in the Derwent Estuary.

MESODESMA NITIDA, Deshayes.

P.Z.S., 1854, p. 338.

North Coast.

CHIONE PERONII, Lamarck.

Anim. S. Vert., Vol. V., p. 606, 1818.

Common on beach at Lady Barron, Flinders Island. Perhaps only a variety of *C. scalarina*, Lamarck.

DOSINIA CROCEA, Deshayes.

B.M. Cat., No. 10, 1853, Type from Flinders Id.

This species has been retaken in the Furneaux Group by the Messrs. Atkinson.

ERYCINA PARVA, Deshayes.

P.Z.S., 1856, 182.

Off Arch Id., two valves; off Thouin Bay, 40 fathoms, one valve.

MONTACUTA DROMANAENSIS, Gatliff and Gabriel.
P.R.S., Vic., 1912, Vol. XXV., p. 167, Pl. IX., figs. 1-4.
Several specimens from Sulphur Creek, near Penguin.

CYAMIOMACTRA COMMUNIS, Hedley.

P.L.S., N.S.W., 1906, Vol. XXX., p. 541, Pl. 31, figs. 11, 13.

North Coast; probably Tamar Heads. Collected by A. Simson.

CUNA PLANILIRATA, Gatliff and Gabriel.

P.R.S., Vic., XXIV. (N.S.), 1911, p. 191, Pl. XLVII., figs. 13-17.

100 fathoms, 7 miles east of Cape Pillar, a fair number occurred. A very similar species—or possibly variety—was found plentifully off Thouin Bay, in 40 fathoms. I think it very doubtful if it is correctly placed in *Cuna*.

PRONUCULA DECOROSA, Hedley.

M.A. Mus., IV., pt. 5, 1902, p. 290, fig. 39.

Several specimens from off Pilot Station, in nine fathoms, seem a variety of this. In our shells the radiating ribs are less pronounced.

Pl. VIII., fig. 42 and 42a.

GLYCIMERIS AUSTRALIS, Quoy and Gaimard.

Voy. Ast. III., 1835, p. 469, Pl. 77, figs. 7-9.

Valves occurred at Forsyth Island, Furneaux Group. Our shells are well represented by Reeve's figure of *P. flammea*, Conch. Icon., Pl. XI., fig. 7, which is possibly distinct from *G. australis*.

ARCOPERNA SCAPHA, Verco.

T.R.S., S.A., Vol. XXXII., 1908, p. 196, Pl. XII., figs. 1-5.

40 fathoms, off Thouin Bay; a few single valves.

MYODORA SUBALBIDA, Gatliff and Gabriel.

P.R.S., Vic., July, 1914, p. 96, Pl. XV., f. 14.

100 fathoms, 7 miles east of Cape Pillar; a single valve.

SOME OBSERVATIONS ON DISTRIBUTION, ETC.

CALLOCHITON INORNATUS, Ten.-Woods.

Until lately this species was only known from our North-West Coast, but it has recently been found in considerable numbers, and of large size, in Port Arthur and D'Entre-

casteaux Channel. That so conspicuous a shell should have been so long overlooked is remarkable, the reason being that search was not made into sufficiently deep water. This shell has a very large fleshy girdle, which shrinks on drying to a fraction of its living size.

CALLOCHITON MAYI, Torr.

Several specimens of this remarkable species have been taken in Port Arthur (E. Mawle), and also in 10 fath., off Pilot Station, previously only known from the N.W. Coast.

ACANTHOCHITES VARIABILIS, Ad. and Ang.

This N.W. species has been taken near George's Bay, East Coast (E. Mawle).

CALLISTOCHITON ANTIQUUS, Reeve.

Numerous examples have lately been taken in Port Arthur by Dr. Torr, W. L. May, and E. Mawle.

OLIVELLA NYMPHA, Ad. and Ang.

A specimen was taken near George's Bay, East Coast (E. Mawle).

MACTRA MATHEWSI, Tate.

Was recorded by Tate and May, without locality. I collected valves on Forsyth Island, Furneaux Group.

SEMELE EXIGUA, A. Adams.

Somewhat doubtfully recorded from Tamar Heads by Tate and May. I found it extremely abundant at the settlement, Barren Island.

NATICA SCHOUTANICA, May.

Since describing this species, I have taken a living specimen in 50-70 fath., off Port Arthur. This shows it to have a shelly operculum.

MARGINELLA OVULUM, Sowb.

This species is variable in size and in the crenulation of the lip, some specimens being strongly toothed, others faintly, and others again perfectly smooth. They may vary in length from 9 mill. to 5 mill. Pritchard and Gatliff* have made the var. or form *tenisoni*, Pritchard, a synonym of *M. pisum*, Reeve, but I consider the shells so identified to be only a form of *ovulum*. Last year I sent a number of *M. ovulum* to E. A. Smith, of the British Museum, who replied, 24th June, 1912:—"We fortunately have that species (viz., *ovulum*), and other species described, from Professor Bee's collection (acquired in 1880).

* *Proc. R. S., Vict.*, 1906, p. 46.

It was described without a locality, but in the Museum we have other specimens from Brisbane, Queensland. All the examples are larger than any you have sent, the type being 8 mill. in length. Your largest is only $6\frac{1}{2}$ mill. None of our shells have any signs of denticulation within the outer lip, which is quite smooth. The form of the shell and basal plicæ are similar in both. The only difference, therefore, is that of size and smoothness, or denticulation of the labrum.

M. pisum, Reeve, is a minute form, 3mill. long, and different in shape. It is shorter, and more globular; plicæ, four in number, and the outer lip is smooth within, not denticulate. The form is quite different to the shells you sent as *M. ovulum*.

It seems to me that your shells should be regarded as a variety of *ovulum*, and not as distinct. The smaller size and denticulation, which is variable, is not enough, I think, to separate them."

I now have Tasmanian specimens quite as large as the type, and, like it, smooth on the lip. It seems to be the most universally distributed species on our continental shelf, being invariably present in dredgings.

TARANIS ACULEATA, N. Sp.

Shell small, broadly fusiform, yellowish brown, whorls five, including a prominent two-whorled protoconch, which is finely spirally lirate. Adult whorls strongly angled about the upper third by a prominent spiral keel, which bears at regular intervals well developed spinose nodules, about 10 on the body whorl; above to the suture the whorl is concavely hollowed, with a finely nodulous keel. Below the carina are two prominent keels, bearing numerous sharp nodules, connected somewhat irregularly above and below, with axial riblets. On the base are about seven keels, the first two slightly nodose, the rest smooth. The three prominent keels give the whorls a square appearance. Aperture rather expanded, canal short and open, columella concave, corrugated by the basal keels, which pass into the shell. Outer lip armed by four spines, alternating large and small; sinus sutural, deep and narrow, bounded on one side by the sutural liræ, and on the other by the finely nodulous keel.

Length 3. Breadth 1.8 mill.

Type from 50 fathoms, off Thouin Bay, with eight others. A very beautiful and distinct little species, with affinities to *T. lamellosa*, Sowb.

Pl. I., fig. 1.

TARANIS MICROSCOPICA, N. Sp.

Shell very minute, yellowish, whorls three and a half, including a one and a half whorled protoconch, which is large, rounded, and spirally lirate. The two adult whorls are strongly angled at the periphery, from whence to the suture they are flat or concave. The sculpture consists of sharp, narrow, axial ribs, about twelve on the body whorl, which extend from suture to suture, and pass into the aperture. They are widely separated, the interspaces being crossed by a few very faint spiral liræ. Aperture rather expanded, canal very short. Columella excavate, outer lip strongly varixed, sinus at the suture deep and open and bordered by a varix.

Length 1.3. Breadth 7 mill.

Type from 40 fathoms, off Thouin Bay, with a number of others. An extremely minute species, which is allied to *T. excavata*, Gatliff.

Pl. I., fig. 2.

BELA TASMANICA, Sp. Nov.

Shell small, ventricose, white, the front half of the body whorl brownish, whorls three and a half, including a one and a half whorled protoconch, which is spirally lirate. Whorls two, rounded, crossed by strong axial ribs, about nine on the body whorl, they follow each other at the suture, and fade away on the base. These ribs are separated by spaces about twice as wide as themselves, and crossed by numerous flattened liræ, which are close together, and slightly corrugate the ribs. Aperture large, oval, scarcely forming a canal; above it forms a round shallow sinus.

Length 2.6. Breadth 1.5 mill.

Type, D'Entrecasteaux Channel, 10 (?) fathoms. Two others from deep water off Schouten Island.

This is very similar to some of the European species of *Bela*. Possibly it would be as well placed with *Anachis*.

Pl. I., fig. 3.

CLATHURELLA NODORETE, Sp. Nov.

Shell small, narrowly pyramidal, white, whorls five and a half; the tip is at first smooth, but becomes ribbed and gradually assumes the adult sculpture. Whorls encircled by two prominent keels, one a little below the suture, and the other below the middle of the whorl. There is also a smaller one just visible above the suture. They are crossed by strong ribs of about equal size, ten on the penultimate, and form square meshes. At the points of intersection

is a rounded nodule. There are several smaller keels on the base, corrugated by the ribs. Aperture large, narrowed above and below, where there is a short canal. Outer lip strongly dentated by the sculpture, and thickened by one of the axial ribs. Sinus sutural, distinct, surrounded by a raised border.

Length 3.3. Breadth 1.5 mill.

Type, from 80 fath., off Schouten Id.; four others, mostly imperfect, from other places in deep water. Resembles *C. modesta*, Angas, which is much larger, more elongated, with more spirals, and without the nodules.

Pl. I., fig. 4.

VEXILLUM PUMILIO, N. Sp.

Very small, fusiform, yellowish, the central third of the whorls paler. Whorls three, exclusive of a two-whorled, smooth, pointed protoconch, which is brown and polished. Adult whorls strongly ribbed, fourteen on the body whorl, twelve on the penultimate. Aperture rather narrow, especially in front. The columella bears three rather weak plaits.

Length 4.3. Breadth 2 mill.

Habitat—Type, from 40 fathoms, off Thouin Bay, with 20 others, and from several other localities, from 10 to 100 fathoms.

Remarks.—Related to *V. scalariformis*, Ten.-Woods. It is about half the length, has a whorl less, a more elongated protoconch, and narrower aperture, and is in every way a less robust shell. *V. legrandi*, Ten.-Woods, is also a near relative, but is a broader and more solid shell, with a large, rounded protoconch.

Pl. I., fig. 5.

MARGINELLA AURICULATA, Sp. Nov.

Shell very small, pyriform, yellowish white. The spire is quite hidden. Aperture as long as the shell, and rises very much above the summit, giving the shell a lopsided appearance; aperture linear, narrow, expanding at the rounded front. Columella convex, bearing about 6 plaits, of which the first two are much the stronger. The first ascends nearly perpendicularly; the second is very transverse; the remaining four are small, of nearly equal size, and widely spaced. Outer lip much thickened, with a few small tubercles near the middle of its length, on the inside.

Length 1.8. Breadth 1.1 mill.

Type, with 30 others, from 40 fath., off Thouin Bay. A most distinct form, that cannot be mistaken for any other.

Pl. I., fig. 6.

MARGINELLA SUBAURICULATA, Sp. Nov.

Shell minute, smooth, greyish-white, very squat and broad. Whorls about three, the spire minute, but distinct. Last whorl ventricose. Aperture rather narrow, but expanding in front. Columella convex, with six plaits, the basal one very strong and much curved, the remaining five are small, decreasing as they ascend. Outer lip massive, simple, rises above the summit of the shell, curves widely outwards, but with sinuous inward curve as it descends.

Length 1.5. Breadth 1.2 mill.

Type, from 40 fathoms, off Thouin Bay, with a few others. A remarkably obese little species, that seems thoroughly distinct from any other.

Pl. II., fig. 7.

MARGINELLA THOUINENSIS, Sp. Nov.

Shell small, white, semi-transparent, ovate, spire hidden. Aperture narrow above, but widening considerably towards the rounded front. Columella convex, bearing about nine plications, of which the first three are strong. Those above are very much smaller. Outer lip rises above the summit, is strongly thickened, and simple.

Length 2. Breadth 1.4 mill.

Type, from 40 fathoms, off Thouin Bay, with about thirty others. It forms one of a small group in company with *M. pumilio*, Tate and May, and *M. flindersi*, Prit. and Gat., of which *pumilio* is intermediate, and possibly they are all variants of one species.

Pl. II., fig. 8.

MARGINELLA FREYCINETI, Sp. Nov.

Shell very small, white and shining, ovate, narrower in front, spire minute, but distinct, of about two turns. Aperture rather narrow, widening gradually towards the front. Columella slightly convex, and bearing three fairly equal plications. The outer lip rises below the spire, and is only slightly shouldered; it is strongly thickened and simple.

Length 2. Breadth 1.2 mill.

Type, with a number of others, in 40 fathoms, off Thouin Bay, Freycinet Peninsula, also from C. Pillar, 100 fathoms, and other places, including the Furneaux Group. Related to *M. connectans*, May, but is only half the size, less cylindrical, with more spire, and three equal sized plaits.

Pl. II., fig. 9.

MARGINELLA PROCELLA, Sp. Nov.

Shell elongately oval, yellowish-white, with traces of two yellow bands; spire small, of three whorls, partly covered by a callus, which extends from the columella over half the front of the shell, and also considerably behind the outer lip. This is a rare feature amongst our Marginellas. Columella convex, with three moderate sized, strongly ascending plaits, the first two being close together; there is a fourth retreating plication considerably above the others. Outer lip not much thickened, and strongly incurved; it rises above the level of the spire. The aperture is rather narrow.

Length 5.5. Breadth 4.5 mill.

Type, from 24 fathoms, in Storm Bay (whence the name), 40 fathoms, off Schouten Id., four examples. I also have a specimen from Port Jackson. It resembles *M. inconspicua*, Reeve, which, however, has a much more exerted spire, and a finely crenated lip.

Pl. II., fig. 10.

MARGINELLA PRÆTERMISSA, Sp. Nov.

Shell large, solid, fusiform, with a tall spire, colour yellow, deeper on the upper part of the whorl, but with a light band at the suture. Whorls $4\frac{1}{2}$, slightly convex. Apex rather sharp, body whorl sloping above, not shouldered. Numerous low, rounded ribs begin on the last spire whorl, and extend from suture to suture; on the body whorl they fade away before reaching the periphery. Lip somewhat sinuous, strongly thickened; it bends back at the upper attachment, forming a channel, or sinus. Columella concave, bearing four distinct plaits, which become more transverse and stronger as they ascend.

Length 13.5. Breadth 5 mill. But a co-type is 15 mill. long.

Type, with several others, received from Mr. Williamson, of Brown's River, who says he is sure they are Tasmanian, and believes they came from the East Coast. Exact locality uncertain.

Pl. II., fig. 12.

This is a very fine species, being only exceeded in size amongst our Tasmanian members of the genus by *M. muscaria*. It has been overlooked as being a var. of

M. tasmanica, with which species it has much affinity, but differs in the distinct ribbing, the contour of the lip, and the very much greater size. *M. tasmanica* is very constant in size and shape, and always smooth. *M. formicula* is a very much broader shell, with far stronger ribs. *M. georgiana*, May, is much smaller, of a thin, transparent texture, and the ribs do not reach to the suture.

MARGINELLA GEORGIANA, Sp. Nov.

Shell elongate, narrow, with a well developed spire, colour yellowish-white, apex blunt and rounded; whorls 3, hollowed above; smooth at first, but small, wrinkle-like ribs develop and become more prominent on the body whorl; they extend from the shoulder, and fade away before reaching the centre of the body whorl. Aperture narrow above, widening rapidly towards the front; outer lip sinuous, moderately thickened, unarmed. Columella excavate, and bearing four ascending plaits, the upper three being much the stronger.

Length 7. Breadth 3.5 mill.

Type, with three others, from 15 fathoms, near George III. Reef, below Southport.

This is a near relative to *M. formicula*, Lamk., but it is much narrower, with a longer spire, much less strongly ribbed, and of a thin, delicate texture. My experience of *M. formicula* shows it to be a strictly littoral species, living between tide marks, whilst this form was from fairly deep water.

Pl. III., fig. 13.

MARGINELLA CADUCOCINCTA, Sp. Nov.

Shell very small, obtusely pyriform, with a moderately elevated sharp spire. White, with three pale chestnut bands. Whorls three; the body whorl very broad-shouldered, gradually decreasing to the narrow base. Aperture narrow above, widening towards the front. Outer lip thick, solid, and smooth. Columella bearing four strong plaits. The first colour band is at the suture, the third at the upper plication, and the other intermediate. They are indistinct, often scarcely discernible, and very frequently the shell is pure white.

Length 3. Breadth 2 mill.

Although considerably resembling several others, I cannot place it with any described species known to me.

Type, with about two hundred others, from 40 fathoms, off Thouin Bay.

Pl. II., fig. 11.

ZAFRA COLUMNARIA, Sp. Nov.

Shell small, elongate, of a graceful tapering form, shining, pale yellowish, with a row of white dots above the centre of the whorl, and larger golden-brown spots scattered irregularly. Whorls five, including a smooth-polished, elongated, swollen protoconch. Adult whorls moderately rounded, strongly axially ribbed, about 16 on the penultimate, they extend right across the whorls, but become evanescent on the base, which has a few faint keels. Aperture elongate, narrowed above and below. Columella callus, spreading somewhat over the base. Outer lip thickened by one of the ribs.

Length 4.5. Breadth 2 mill.

Type, with several fragments, from 100 fathoms, off Cape Pillar; also from 40 fathoms, off Thouin Bay; one small. An elegant little form, which appears to be very rare.

Pl. III., fig. 14.

EULIMA SCHOUTANICA, Sp. Nov.

Shell yellowish-white, highly polished, sharply-pyramidal, recurved, apex minute, nucleus transparent. Whorls 10, slightly rounded, increasing slowly to the body whorl, which is largely developed, suture distinct. Mouth pyriform. Lip rather expanded, and callously thickened on the columella.

Length 3.7. Breadth 1.3 mill.

Type, from 40 fathoms, off Schouten Island. Another, not quite adult, from 50-70 fath., off Port Arthur, and a third from Harrison's collection, probably from D'Entrecasteaux Channel. Distinguished by its narrow spire, curved in opposite directions, and the swollen body whorl.

Pl. III., fig. 15.

It is distantly related to *E. commensalis*, Tate.

EULIMA COLUMNARIA, Sp. Nov.

Shell yellowish-white, glassy, semi-transparent, narrow, sub-cylindrical, slightly bent near the top. Whorls 8, not much rounded, and slowly increasing, apex mammillated. Mouth broadly pyriform. Lip anteriorly expanded, and reflexed over the base, which is narrowly excavate.

Length 3.4. Breadth 1 mill.

Type, from 50-70 fathoms, off Port Arthur, with six others.

Pl. III., fig. 16 and 16a.

EULIMA MAMILLA, Sp. Nov.

Shell very minute, white, shining, pyramidal. Whorls $4\frac{1}{2}$, rapidly increasing; apex mammillated; mouth broadly pyriform; lip anteriorly expanded; umbilical area moderately excavated.

Length 1.4. Breadth 0.5 mill.

Type, 50-70 fathoms, off Port Arthur, with one other. Another from 40 fathoms, off Schouten Island. An extremely minute *Eulima*, but easily recognisable, the swollen apex being a good distinguishing feature.

Pl. III., fig. 17.

EULIMA CUNÆFORMIS, Sp. Nov.

Shell yellowish-white, highly polished, narrowly pyramidal, slightly curved, apex blunt. Whorls 8, slightly rounded, suture distinct, the base of the preceding whorl showing clearly through the shell; body whorl tumidly developed. Mouth small, pyriform, umbilical area broadly excavate.

Length 4. Breadth 1.5 mill.

Type, with one other, from 50 fathoms, off Maria Island. Two, from 50-70 fathoms, off Port Arthur, and four, from 40 fathoms, off Schouten Island. A species without very marked characters, but which I cannot unite with any other known to me. Apex further enlarged.

Pl. III., fig. 18, shell, fig. 18a.

ODOSTOMIA OCCULTIDENS, Sp. Nov.

Shell minute, white, translucent, shining, smooth. Whorls three, plus a prominent heterostrophe pullus. Adult whorls rounded, regularly increasing. Aperture ovately-pyriform. Columella arched, thin, with a minute plication, rather above the centre, which is invisible from a front view.

Length 1.5. Breadth 1 mill.

Type, with several others, from 100 fathoms, 7 miles east of Cape Pillar; also from other localities, from 10 to 50 fathoms. A very variable species in some particulars. The shape is usually fairly constant, although it is some times a little longer than the type, and it scarcely varies in size. It may have no plait at all, or it may be fairly well developed. The pullus may be prominent as figured or quite immersed. I have tried to separate it into two species, but all the forms seem to intergrade.

Pl. IV., fig. 19.

ODOSTOMIA CRASSICOSTA, Sp. Nov.

Shell minute, white, solid, short, truncated, boldly ribbed. Whorls 3, plus a smooth, inverted tip. Whorls rounded; suture deeply impressed, or channeled. About 20 strong rounded axial ribs cross the whorls, and bend over into the suture, and disappear on the base. They are separated by deep furrows of about equal width, which are crossed by numerous slightly raised liræ, which do not pass over the ribs, but continue on the base. Mouth ovately pyriform, slightly expanded in front. Columella curved, a little reflected over a narrow umbilicus, and bearing medially a very small, blunt tooth, which is quite invisible from a front view.

Length 1.7. Breadth 1 mill.

Type, from 50-70 fathoms, off Port Arthur, with several others; from off Schouten Id., one specimen. It has considerable resemblance to *O. oodes*, Watson, Chal. Report, p. 485, from Cape York, but seems a very distinct little species.

Pl. IV., fig. 20.

TRIPHORA OBLIQUA, Sp. Nov.

Shell large, very elongated, rugose, yellowish-brown. Whorls at least 20, flattened, broadest at the lower suture. Sculpture: A prominent rounded, smooth pullus develops two strong keels, which continue on two whorls, and are abruptly succeeded by two rows of gemmules, which after 8 or 9 whorls pass into the final adult sculpture, which consists of three nodular keels, the lower two the strongest; the nodules, and their interspaces, form axial ribs, which, being nearly in a line with the spire at first, become more oblique as they descend, trending towards the right. There is also a well developed sutural keel, which strongly margins the periphery of the body whorl, and there are two smaller ones on the base. Mouth rather square, produced behind into a tubular canal.

Length 17. (?) Breadth 3 mill.

Type, from 50-70 fathoms, off Port Arthur. No perfect specimen of this well-marked species has yet been taken, and the figures are from two examples. The apical portion is well preserved, but the mouth is somewhat imperfect, and the tube may be more produced. This is one of our largest species. The length given is approximate, but from a comparison with several overlapping fragments, is nearly correct. The strong rugose appearance, and particularly the very oblique axial ribs, are very striking, and the apex is also a good specific guide.

Pl. IV., fig. 21, lower portion of shell, fig. 21a, apical portion.

ROYA DEVEXA, Sp. Nov.

Shell small, white, much elevated, with a large, prominent spiral nucleus, which projects far forward over the posterior slope, and consists of three rapidly increasing whorls, smooth and shining. Adult shell smooth, but not shining, lamellated with growth lines, which are strongly developed on the anterior slope; there are faint indications of radial ridges near the base. It is possible the species reaches a much greater size, and that these radials would then develop into regular ribs. The base forms a narrow oval, rather pointed under the apex. There are the remains of a thin deciduous epidermis.

Height 5. Breadth, greatest $4\frac{1}{2}$, least 3 mill.

Type, with five others (all smaller), from 50-70 fathoms, off Port Arthur, and an apical portion from 40 fathoms, off Schouten Island. This remarkable species seems most nearly related to *R. violacea*, Angas.

Pl. IV., fig. 22.

STREPHOPOMA NUCLEOCOSTATA, Sp. Nov.

Adult shell roughly and irregularly involute in the same plane, yellowish, sculptured by numerous lamellar growth lines and periodic mouths. The nucleus is embraced and almost concealed by the first turns of the adult. It is naticoid in form, of about three turns, at first flattened and smooth; axial ribs develop on the last whorl, and become stronger until they reach the lip; mouth ovate, much produced in front. Columella expanded over a small umbilicus. Colour purplish-brown, with a golden shine.

Dimensions of nucleus: Height 1.2. Diameter 1.5 mill. Major diameter of adult about 8 mill.

Type, from Frederick Henry Bay, taken from kelp roots. The nucleus shell is occasionally found in dredgings.

Pl. IV., fig. 23, and Pl. V., fig. 23a.

RISSOA OBELISCUS, Sp. Nov.

Shell small, yellowish white, elongate, narrowly pyramidal, smooth and polished; apex somewhat bluntly coniform. Whorls 7, slightly convex, broadest near the lower suture, which is well impressed. Mouth roundly oval, columella lip a little expanded over a distinct umbilical chink.

Length 2.2. Breadth 1 mill.

Type, from 50-70 fathoms, off Port Arthur, with four others; and one, from 40 fathoms, off Schouten Island. It considerably resembles *R. scopulorum*, Watson, from the Sandwich Islands. Chal. Report, Pl. XLV., fig. 4.

Pl. V., fig. 24.

RISSOA PUPOIDES, Sp. Nov.

Shell minute, white, shining, cylindrical, apex blunt and rounded. Whorls 5, much rounded, suture deeply impressed. Mouth roundly ovate, pointed above. Columella expanded over an umbilical chink.

Length 1.7. Breadth 0.8 mill.

Type, from 50-70 fathoms, off Port Arthur, with about a dozen others. Remarkable for its pupæform shape and minute size.

Pl. V., fig. 25.

RISSOA SIMILLIMA, Sp. Nov.

Shell very small, bluntly conical, broad, solid, whitish. Whorls 4, rounded, rapidly increasing, apical one glassy and shining, the rest opaque; suture well impressed; body whorl very large. Mouth large, rounded on the outer lip, but rather straight on the columella, producing an angle in front; lip patulus, and reflexed over a distinct umbilical crevice. Sculpture: The body whorl is crossed axially by numerous narrow, horny, or translucent bands, which seem as though they might be the intervals between very low riblets, or growth lines, but I have not been able to quite satisfy myself that these spaces are really raised.

Length 1.8. Breadth 1.3 mill.

This is very near to *R. principis*, Watson, Chal. Report, p. 608, Pl. XLIV., f. 13, of which it may be a variety. Our shell is broader, and the mouth more angular. Although not common, it seems to be well distributed on our continental shelf.

Pl. V., fig. 26.

RISSOA MULTILIRATA, Sp. Nov.

Shell elongately pyramidal, white, clouded with a few chestnut blotches. Whorls five, rounded, including a smooth pullus of two rounded whorls. The sculpture consists of flatly rounded keels, separated by narrow grooves, about eight on the penultimate, and ten on the body whorls; base smooth. The first keel, below the well-impressed sutures, is larger than the others, and has a wider groove below it. Aperture roundly pyriform; columella lip expanded, rather produced in front. Outer lip slightly denticulated by the sculpture.

Length 3. Breadth 1.5 mill.

Type, with several others, from Frederick Henry Bay. A variety from C. Pillar has the centre of the whorls smooth. Its nearest ally here, *R. layardi*, Pett., is a smaller, narrower shell, with fewer and stronger keels.

Pl. V., fig. 27.

RISSOA FREYCINETI, Sp. Nov.

Shell minute, white, shining, solid, pyramidal. Whorls four and a half, rounded, including a smooth pullus of two whorls. Adult whorls two and a half, at first with three keels, but others develop, so that there are six to seven on the body whorl. These keels are strong, rounded, and separated by grooves of equal width. Aperture large, ovate, pointed above. Columella lip expanding over the umbilical area. Outer lip rather thick.

Length 1.4. Breadth 8 mill.

Type, with four others, from 40 fathoms, off Thouin Bay, Freycinet Peninsula. I cannot connect this with any known species.

Pl. V., fig. 28.

ALVANIA THOUINENSIS, Sp. Nov.

Shell minute, pure white, elongate, whorls four and a half, including a smooth, shining protoconch of one and a half turns. Adult whorls three, rounded; suture canalliculate; first whorl widest at its lower third, where there is a keel, crossed by narrow axial riblets. These riblets continue on the other whorls, but disappear on the base. On the second whorl about four keels appear, which become stronger and more numerous on the body whorl, where there are about ten, and raise small nodules, where they cross the ribs. Aperture pyriform; columella much rounded; lip somewhat expanded. Outer lip thin and simple.

Length 1.8. Breadth 0.8 mill.

Type, with twelve others, from 40 fathoms, off Thouin Bay. Distinguished by its deeply excavate sutures.

Pl. VI., fig. 29.

ALVANIA SEMINODOSA, Sp. Nov.

Shell small, shining, pale yellowish, the central third of the whorl white, elongate. Whorls five; the protoconch, at first smooth, develops about five faint spirals. Whorls rounded, suture well impressed. The spire whorls bear

about nine nodulous-like ribs, which become narrower and weaker as they descend, and almost disappear on the body whorl. There are a few faint spirals on the base. Aperture rather broadly pyriform, oblique, surrounded by a well-defined margin.

Length 2. Breadth 0.9 mill.

Type, with 20 others, from 40 fathoms, off Thouin Bay. A very distinct form. It is remarkable that nearly all the specimens taken have been injured by some predatory mollusc.

Pl. VI., fig. 30.

ALVANIA SUPRASOULPTA, Sp. Nov.

Shell elongate, white or yellowish. Whorls five and a half, rounded, suture well impressed; protoconch, of one and a half turns, smooth. Adult whorls four. The spire whorls bear three spiral keels, about equally spaced. They are crossed by numerous axials of about equal size and distance, forming square meshes, which latter are finely spirally lirate; small nodules are formed by the junction of the keels. On the base of the body whorl are three extra keels. Aperture rounded. Outer lip thickened and scalloped by the keels.

Length 2.4. Breadth 1.1.

Type, from 40 to 50 fathoms, off Thouin Bay, with a number of others. A beautifully sculptured little shell, which appears to be undescribed.

Pl. VI., fig. 31.

AMPHITHALAMUS TRIANGULUS, Sp. Nov.

Shell small, brown, shining, pyramidal. Whorls four, including a smooth, dome-shaped protoconch. The three adult whorls are encircled by two rounded keels, one at the suture and the other at the periphery. The upper one is at first smooth, but develops nodules, which give it a beaded appearance on the body whorl. The lower keel is itself divided by a narrow groove. On the base are three small keels. Aperture roundly-ovate, peristome continuous, pointed above, forming a flattened ring, whilst the opening itself is margined by a narrow, raised thread.

Length 1.5. Breadth 1.

Type, with twenty others, from 40 fathoms, off Thouin Bay.

Pl. VI., fig. 32.

AMPHITHALAMUS AURANTIOCINCTUS, Sp. Nov.

Shell small, narrowly pyramidal, white, with two orange bands. Whorls five, rounded, suture well impressed, faintly axially costate; first three whorls, and base smooth. There is a narrow orange band at the periphery, which just shows above the suture on the spire; a second is on the middle of the base. Aperture roughly quadrangular. Columella straight and upright; behind it an umbilical chink; outer lip sharp; the front lip bends back towards the axis of the shell.

Length 2.5. Breadth 1.4 mill.

Type, with several others, mostly broken, from 40 fathoms, off Thouin Bay. It resembles *A. erratica*, May, which is smaller, of a thinner texture, a rounder mouth, and without the colour bands.

Pl. VI., fig. 33.

AMPHITHALAMUS PERTUMIDUS, Sp. Nov.

Shell minute, white, ovate, smooth. Whorls four, including a rounded pullus, which is inclined to the left. Whorls much rounded, contracting sharply to the impressed suture. The third whorl projects tumidly to the right, beyond the line of the spire. Mouth ovately pyriform, the outer lip forming a segment of a circle; columella lip somewhat expanded, obtusely angled in front.

Length 2.2. Breadth 1 mill.

Type from 40 fathoms, off Thouin Bay, with four others. Also from 100 fathoms, off Cape Pillar, three examples. Co-types are mostly imperfect.

Pl. VI., fig. 34.

AMPHITHALAMUS TIARA, Sp. Nov.

Shell minute, tumid, white, shining, with faint growth lines. Whorls three and a half, very much rounded; suture deeply impressed. The third whorl is much expanded and flattened, giving the shell the appearance of being crowned by a turban. Aperture large, oval, entire; lip expanded, particularly over the front of the columella.

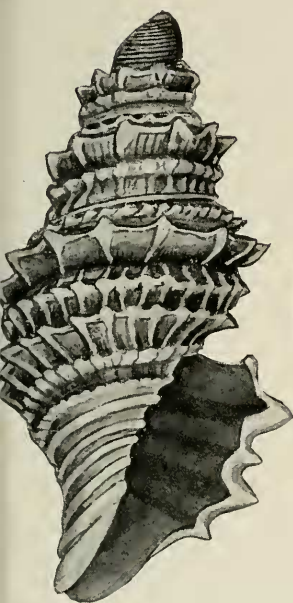
Length 2. Breadth 1 mill.

Type, with three others, from 40 fathoms, off Thouin Bay.

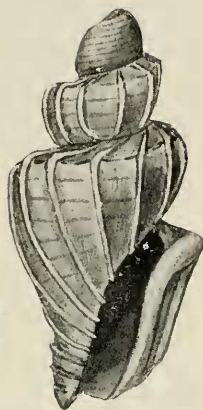
Pl. VII., fig. 35.

EPIGRUS SEMICINCTUS, Sp. Nov.

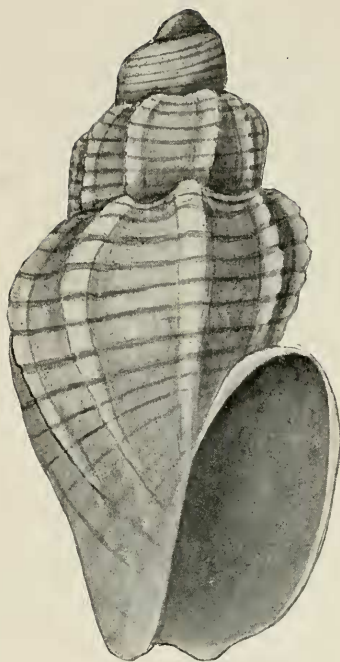
Shell small, narrowly elongate, smooth, chestnut or yel-



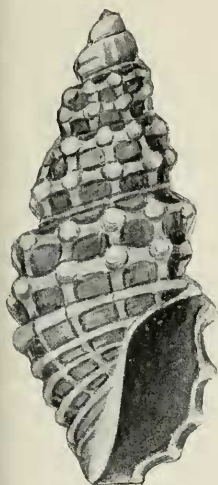
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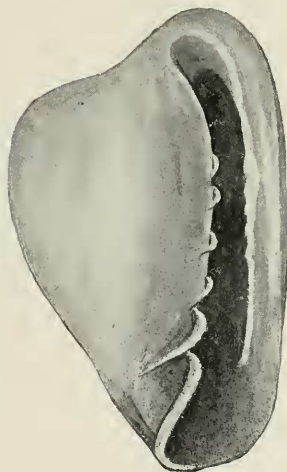
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Fig. 1—*TARANIS ACULEATA*, N. Sp.

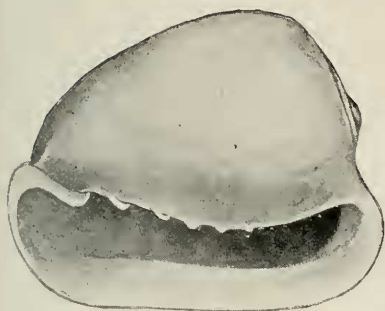
Fig. 2—*TARANIS MICROSCOPICA*, N. Sp.

Fig. 3—*BELA TASMANICA*, Sp. Nov.

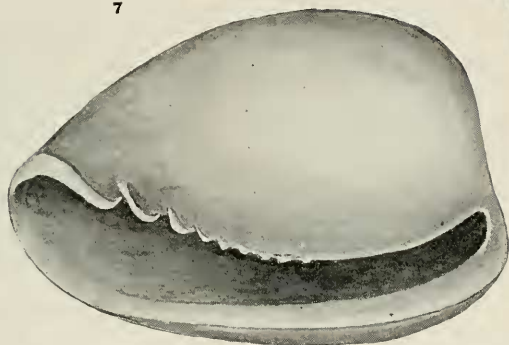
Fig. 4—*CLATHURELLA NODORETE*, Sp. Nov.

Fig. 5—*VEXILLUM PUMILIO*, N. Sp.

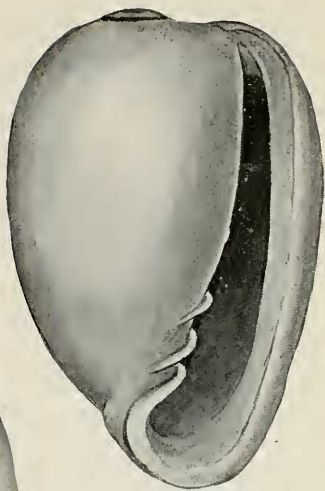
Fig. 6—*MARGINELLA AURICULATA*, Sp. Nov.



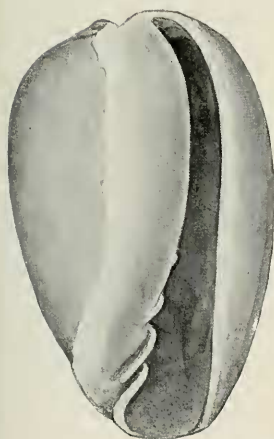
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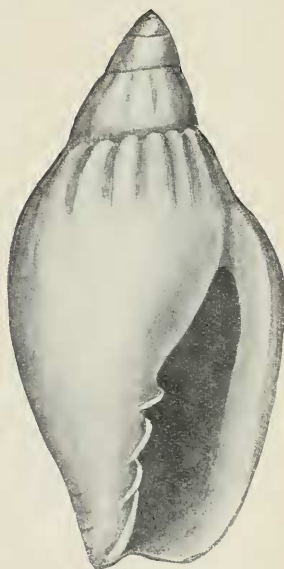
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Fig. 7—*MARGINELLA SUBAURICULATA*, Sp. Nov. Fig. 10—*MARGINELLA PROCELLA*, Sp. Nov.
 Fig. 8—*MARGINELLA THOUINENSIS*, Sp. Nov. Fig. 11—*MARGINELLA CADUCOCINCTA*, Sp. Nov.
 Fig. 9—*MARGINELLA FREYCINETI*, Sp. Nov. Fig. 12—*MARGINELLA PRÆTERMISSA*, Sp. Nov.